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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,527	09/05/2003	Mark W. Waldrop	937-1499	8768
23117 7590 02/22/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER CARRILLO, BIBI SHARIDAN	
			ART UNIT 1746	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/656,527		WALDROP ET AL.	
	Examiner		Art Unit	
	Sharidan Carrillo		1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-11, 13-24, 36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) 3, 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 9-11, 13-24, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-7, 9-11, 13-24, 36-37 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. The Bib Data Sheet needs to be amended because it recites an incorrect filing date of 9/6/2002 for provisional application 60/408604. According to the declaration, the filing date of the provisional application is 9/5/2002. Correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1746

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 4, 10, 13-16, 18-22, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fusiak (5049300) in view of Sullivan (5232515) and further in view of Freij (4906303).

Fusiak teaches a method of removing paint from wood and metal using acidified NMP (abstract, col. 2, lines 30-35). In reference to the pH adjuster, Fusiak teaches that NMP is acidified with an inorganic or organic acid having a pKa of less than 4.0. Fusiak fails to teach removing paint from plastic parts. Sullivan teaches removing paint from plastic parts (i.e. for use in automotive applications) using a composition comprising NMP (col. 1, lines 5-10, col. 4, lines 5-39). Sullivan further teaches removing paint from wood and metal.

It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include stripping paint from plastic parts, as taught by Sullivan, since both Fusiak and Sullivan teaches using NMP for stripping paint.

Fusiak in view of Sullivan fails to teach ultrasonic energy. Freij teaches removing paints from articles using NMP, in combination with surfactants, and ultrasonics (col. 2, lines 35-40). It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include ultrasonic energy as taught by Freij, for purposes of enhancing the removal of paint from the substrate surface. Additionally, the

Art Unit: 1746

use of ultrasonics to enhance contaminants and/or paint removal is notoriously well known in the art as evidenced by Bivins et al. 6511546, Muraoka et al. 6696228).

In reference to claims 2 and 14, refer to col. 2, lines 29-31 of Fusiak. In reference to claims 4 and 13-14, Fusiak teaches NMP and a mineral acid such as sulfuric or phosphoric acid. In reference to claim 10, refer to the teachings of Fusiak. In reference to claims 15-16, Fusiak teaches sulfuric acid, but fails to teach hydrochloric acid. Examples given include phosphoric acid and sulfuric acid. Since both hydrochloric acid and sulfuric acid have pKa values of less than 4, it would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to substitute HCl for sulfuric acid since both HCl and sulfuric acid are mineral acids and have pKa values of less than 4. In reference to claims 18-19, Fusiak in view of Sullivan fail to teach using elevated temperatures to remove the paint. Freij teaches paint stripping at temperatures from 50-90 degrees centigrade (col. 3, lines 60-63). It would have been obvious to a person of ordinary skill in the art to modify the method of Fusiak to include heating at elevated temperatures, as taught by Freij, for purposes of enhancing paint removal from the substrate surface. In reference to claims 20 and 22, it would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include nylon and styrene since Fusiak in view of Sullivan teaches cleaning plastics and nylon and styrene are types of plastic materials. In reference to claim 21, refer to col. 4, lines 7-9 of Sullivan. In reference to rinsing and drying refer to col. 4, lines 55-60 and claim 9 of Sullivan. In reference to claim 36, Fusiak teaches

Art Unit: 1746

NMP, surfactant and mineral acids. In reference to claim 37, Fusiak teaches non-linear alkoxyated alcohols (col. 3, lines 25-40).

5. Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fusiak (5049300) in view of Sullivan (5232515), in view of Freij (4906303) and further in view Nee (5306349).

In reference to claim 17, Fusiak in view of Sullivan and Freij fail to teach the desired ultrasonic frequency. Nee teaches removing paint coatings (i.e. lacquer) using ultrasonication (Abstract). In col. 2, lines 45-50, Nee teaches using frequencies within the range of 20kHz-40kHz to remove the coatings. It would have within obvious to the skilled artisan to have modified the modified method of Fusiak, to include an ultrasonic frequency of 20-40kHz, as taught by Nee, for purposes of stripping the paint coating. Additionally, it would have been within the level of the skilled artisan to have adjusted the frequency depending upon the amount and contaminants present on the substrate surface. In reference to claim 23, Freij teaches varying the treatment times depending upon the bath temperature. The higher the bath temperature, the shorter the treatment time. Additionally, it would have been within the level of the skilled artisan to adjust the treatment time depending upon the bath temperature, the level of ultrasonics applied, and the amount of paint removal required.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leon et al. (3338756) and further in view of Freij (4906303).

Leon teaches a method of removing paint from plastic substrates using a

Art Unit: 1746

composition comprising dimethylacetamide or dimethyl sulfoxide and phosphoric acid (col. 6, lines 30-40, col. 1, lines 15-17). Leon fails to teach hydrochloric acid. However, it would have been obvious and within the level of the skilled artisan to substitute phosphoric acid for equivalent hydrochloric acid since both acids are considered as mineral acids. Leon teach the invention substantially as claimed with the exception of ultrasonic energy. Freij teaches removing paints from articles using ultrasonics (col. 2, lines 35-40). It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include ultrasonic energy as taught by Freij, for purposes of enhancing the removal of paint from the substrate surface. Additionally, the use of ultrasonics to enhance contaminants and/or paint removal is notoriously well known in the art as evidenced by Bivins et al. 6511546, Muraoka et al. 6696228).

7. Claims 9, 11, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fusiak (5049300) in view of Sullivan (5232515) and Freij (4906303), as applied to claims 1-2, 4, 10, 13-16, 18-22 and 36-37, as described in paragraph 4 above, and further in view of L'ohr e al. (5578135).

Fusiak in view of Sullivan and Freij fail to teach the limitations of claim 9. L'ohr teaches stripping the paint from plastic automotive parts using an organic solvent followed by treatment with the solvent in which stirring and thermal and mechanical energy are supplied to the part in order to remove the paint from the plastic part. L'ohr teaches comminution of the part in order to treat bulky plastic pieces. It would have been obvious to a person of ordinary skill in the art to have modified the method of

Art Unit: 1746

Fusiak to include comminution as well as stirring, as taught by L'ohr, for purposes of effectively removing paint from the part and in order to treat bulky plastic pieces.

Fusiak in view of Sullivan teaches using elevated temperatures for paint stripping. In reference to claim 24, L'ohr teaches treating the plastic chips at elevated temperatures of 80-100 degrees centigrade for 15 minutes (abstract, col. 5, lines 45-48). It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include elevated temperatures, as taught by L'ohr, for purposes of enhancing paint removal. In reference to step d of claim 24, L'ohr teaches filtering out the paint particles and flushing the plastic chips with water and further teaches drying the chips (col. 5, lines 5-27, and col. 6, lines 12-15). It would have been obvious and within the level of the skilled artisan to modify the method of Fusiak to include separating the paint and rinsing and drying the plastic chips, as taught by L'ohr, since such steps are conventional in the recycling and reclamation of plastic parts.

Response to Arguments

8. This application contains claims 3, and 6-7 drawn to an invention nonelected with traverse in Office Action of 5/4/2005. Claims 6-7 have been "currently amended", however, these claims should be withdrawn based on the restriction election of 10/4/2005.

9. The rejections of the claims as being unpatentable over Fusiak in view of Sullivan, or Leon et al. in view of Machac are withdrawn in view of the 1.131 Declaration and Pre-Appeal Conference Decision of 2/6/2007.

Art Unit: 1746

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ushio et al. teach a ultrasonics.

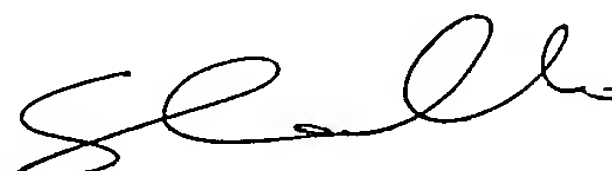
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on M-W 6:30-4:00pm, alternating Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc



SHARIDAN CARRILLO
PRIMARY EXAMINER